

**WHAT IS CLAIMED IS:**

1       1. An article of manufacture for managing devices, wherein the article of  
2 manufacture causes operations to be performed, the operations comprising:  
3           receiving a request implemented via at least one device independent class;  
4           traversing a class hierarchy database to determine at least one device specific  
5 class that corresponds to the at least one device independent class, wherein the class  
6 hierarchy database stores a class hierarchy and associations between classes; and  
7           modifying the received request, wherein in the modified request the least one  
8 device independent class has been translated to the at least one device specific class.

1       2. The article of manufacture of claim 1, the operations further comprising:  
2           mapping at least one device independent class attribute to at least one device  
3 specific class attribute in the modified request;  
4           mapping at least one device independent property to at least one device specific  
5 property in the modified request;  
6           generating a device specific request from the modified request, in response to  
7 mapping the at least one device independent class attribute and the at least one device  
8 independent property; and  
9           sending the device specific request to a managed device.

1       3. The article of manufacture of claim 1, the operations further comprising:  
2           further modifying the received request to include at least one association between  
3 device specific classes in the class hierarchy.

1       4. The article of manufacture of claim 1, wherein the received request  
2 indicates a source class and a requested class, the operations further comprising:  
3           determining a specific association between a first device specific class that  
4 corresponds to the source class and a second device specific class that corresponds to the  
5 specific class, wherein the specific association corresponds to a managed device.

1           5.       The article of manufacture of claim 4, wherein the source class represents  
2 storage pools and the requested class represents storage volumes corresponding to a  
3 storage pool.

1           6.       The article of manufacture of claim 1, wherein the received request  
2 indicates a source class and a base association, the operations further comprising:  
3           determining a first device specific class from the class hierarchy database,  
4 wherein the first device specific class has a specific association with a second device  
5 specific class that corresponds to the indicated source class, and wherein the specific  
6 association corresponds to the base association.

1           7.       The article of manufacture of claim 1, wherein the receiving, traversing,  
2 and modifying are performed by a proxy, the operations further comprising:  
3           generating a device specific request in a device specific language; and  
4           sending the device specific request in the device specific language to a managed  
5 device coupled to the proxy.

1           8.       The article of manufacture of claim 1, wherein the request is received  
2 from a Common Information Model application, and wherein the at least one device  
3 independent class is specified by a Common Information Model schema.

1           9.       The article of manufacture of claim 1, wherein the request comprises a  
2 command that is part of an object oriented management schema for managing non-  
3 homogeneous devices in a network environment.

1           10.      The article of manufacture of claim 9, wherein the management schema  
2 comprises the Common Information Model.

1           11.      A method for managing devices, the method comprising:

2 receiving a request implemented via at least one device independent class;  
3 traversing a class hierarchy database to determine at least one device specific  
4 class that corresponds to the at least one device independent class, wherein the class  
5 hierarchy database stores a class hierarchy and associations between classes; and  
6 modifying the received request, wherein in the modified request the least one  
7 device independent class has been translated to the at least one device specific class.

1 12. The method of claim 11, further comprising:  
2 mapping at least one device independent class attribute to at least one device  
3 specific class attribute in the modified request;  
4 mapping at least one device independent property to at least one device specific  
5 property in the modified request;  
6 generating a device specific request from the modified request, in response to  
7 mapping the at least one device independent class attribute and the at least one device  
8 independent property; and  
9 sending the device specific request to a managed device.

1 13. The method of claim 11, further comprising:  
2 further modifying the received request to include at least one association between  
3 device specific classes in the class hierarchy.

1 14. The method of claim 11, wherein the received request indicates a source  
2 class and a requested class, the method further comprising:  
3 determining a specific association between a first device specific class that  
4 corresponds to the source class and a second device specific class that corresponds to the  
5 specific class, wherein the specific association corresponds to a managed device.

1 15. The method of claim 14, wherein the source class represents storage pools  
2 and the requested class represents storage volumes corresponding to a storage pool.

1        16.    The method of claim 11, wherein the received request indicates a source  
2 class and a base association, the method further comprising:

3            determining a first device specific class from the class hierarchy database,  
4 wherein the first device specific class has a specific association with a second device  
5 specific class that corresponds to the indicated source class, and wherein the specific  
6 association corresponds to the base association.

1        17.    The method of claim 11, wherein the receiving, traversing, and modifying  
2 are performed by a proxy, the method further comprising:

3            generating a device specific request in a device specific language; and  
4            sending the device specific request in the device specific language to a managed  
5 device coupled to the proxy.

1        18.    The method of claim 11, wherein the request is received from a Common  
2 Information Model application, and wherein the at least one device independent class is  
3 specified by a Common Information Model schema.

1        19.    The method of claim 11, wherein the request comprises a command that is  
2 part of an object oriented management schema for managing non-homogeneous devices  
3 in a network environment.

1        20.    The method of claim 19, wherein the management schema comprises the  
2 Common Information Model.

1        21.    An system for managing devices, comprising:  
2            a processor; and  
3            program logic including code capable of causing the processor to perform:  
4            receiving a request implemented via at least one device independent class;

5 traversing a class hierarchy database to determine at least one device  
6 specific class that corresponds to the at least one device independent class, wherein the  
7 class hierarchy database stores a class hierarchy and associations between classes; and  
8 modifying the received request, wherein in the modified request the least  
9 one device independent class has been translated to the at least one device specific class.

1           22. The system of claim 21, further comprising:  
2            a managed device, wherein program logic is further capable of causing the  
3            processor to perform:  
4                mapping at least one device independent class attribute to at least one  
5            device specific class attribute in the modified request;  
6                mapping at least one device independent property to at least one device  
7            specific property in the modified request;  
8                generating a device specific request from the modified request, in response  
9            to mapping the at least one device independent class attribute and the at least one device  
10           independent property; and  
11                sending the device specific request to the managed device.

1           23. The system of claim 21, wherein the program logic is further capable of  
2 causing the processor to perform:  
3            further modifying the received request to include at least one association between  
4 device specific classes in the class hierarchy.

1           24. The system of claim 21, further comprising: .  
2           a managed device, wherein the received request indicates a source class and a  
3           requested class, and wherein the program logic is further capable of causing the processor  
4           to perform:

5                   determining a specific association between a first device specific class that  
6 corresponds to the source class and a second device specific class that corresponds to the  
7 specific class, wherein the specific association corresponds to the managed device.

1               25.    The system of claim 24, wherein the source class represents storage pools  
2 and the requested class represents storage volumes corresponding to a storage pool.

1               26.    The system of claim 21, wherein the received request indicates a source  
2 class and a base association, and wherein the program logic is further capable of causing  
3 the processor to perform:

4                   determining a first device specific class from the class hierarchy database,  
5 wherein the first device specific class has a specific association with a second device  
6 specific class that corresponds to the indicated source class, and wherein the specific  
7 association corresponds to the base association.

1               27.    The system of claim 21, further comprising:  
2                   a proxy, wherein the processor is included in the proxy; and  
3                   a managed device coupled to the proxy, wherein the receiving, traversing, and  
4 modifying are performed by the proxy, and wherein the program logic is further capable  
5 of causing the processor to perform:

6                   generating a device specific request in a device specific language; and  
7                   sending the device specific request in the device specific language to the  
8 managed device.

1               28.    The system of claim 21, wherein the request is received from a Common  
2 Information Model application, and wherein the at least one device independent class is  
3 specified by a Common Information Model schema.

1           29.    The system of claim 21, wherein the request comprises a command that is  
2    part of an object oriented management schema for managing non-homogeneous devices  
3    in a network environment.

1           30.    The system of claim 29, wherein the management schema comprises the  
2    Common Information Model.

1           31.    An system for managing devices, comprising:  
2           means for receiving a request implemented via at least one device independent  
3    class;  
4           means for traversing a class hierarchy database to determine at least one device  
5    specific class that corresponds to the at least one device independent class, wherein the  
6    class hierarchy database stores a class hierarchy and associations between classes; and  
7           means for modifying the received request, wherein in the modified request the  
8    least one device independent class has been translated to the at least one device specific  
9    class.

1           32.    The system of claim 31, further comprising:  
2           means for mapping at least one device independent class attribute to at least one  
3    device specific class attribute in the modified request;  
4           means for mapping at least one device independent property to at least one device  
5    specific property in the modified request;  
6           means for generating a device specific request from the modified request, in  
7    response to mapping the at least one device independent class attribute and the at least  
8    one device independent property; and  
9           means for sending the device specific request to a managed device.

1           33.    The system of claim 31, wherein the received request indicates a source  
2    class and a base association, the system further comprising:

3       means for determining a first device specific class from the class hierarchy  
4   database, wherein the first device specific class has a specific association with a second  
5   device specific class that corresponds to the indicated source class, and wherein the  
6   specific association corresponds to the base association.